Chapter 2

Installation

This chapter describes:

- System requirements
- Installation requirements
- How to install NDSR, non-networked
- How to register NDSR
- How to start NDSR
- How to transfer NDSR registration
- How to unregister NDSR
- How to uninstall NDSR
- How to install NDSR, networked
- How to install additional setups

System Requirements

NDSR 2014 is supported on Microsoft Windows 7. NDSR adds the following to the system requirements that are published by Microsoft for this Windows operating system:

- Disk space for Program Files: 70 MB.
- Disk space for database: Up to 1 GB for the database.
- Disk space for user data per typical project:
  - Backup: 0.5MB
  - Output: 2MB
  - Report: 0.3MB
- Physical Memory to process a typical project:
  - Idle: 70MB
  - Restore: 50MB
  - Output: 300MB
- CPU:
  - Quick generation of output files: 2.66 GHz.
  - Multitasking during output: multi-core processor.
- Software to examine output files:
  - Extract: zip/unzip (e.g., Windows compressed folders).
  - Browse: spreadsheet.
  - Analyze: statistical-analysis.

Installation Requirements

Permissions

Depending on your organization's security policy, NDSR 2014 is normally installed and uninstalled only by a member of the Administrators group.

Every NDSR user must be a member of the Users group or another group that has the following permissions for NDSR *User Data*:

- Modify.
- Read & Execute.
- List Folder Contents.

- Read.
- Write.

An NDSR user must not be a member of any group (including Everybody) that lacks any of these permissions.

Default locations of NDSR *User Data*:

- Windows 7: NDSR *Public Documents* folder.

The files of a network database service are not NDSR *User Data*, and should not be accessible to Users (only to Administrators and the SYSTEM).

Previous NDSR Registrations

Because NDSR is a password-protected program, every copy and version must be registered (although one registration process can cover several versions--see "*Registering NDSR*"). Because a license registration is shared by several versions of NDSR, it is usually simplest to keep all of your license registrations in the same place. For a networked license, this means an additional network share (or subfolder) on the server. For a non-networked license, it means installing NDSR 2014 on the same computer where you have installed previous versions of NDSR.

Windows 7 Public Documents Folder

For simplicity, this NDSR User Manual refers to Windows 7.

NDSR *User Data* include backup files, output files, output-file headers, configuration files, header-export files, and reports. NDSR *User Data* in Windows 7 are no longer kept in the *Program Files* folder, but have been moved to the *Public Documents* folder by default (`C:\Users\Public\Public Documents\NCC\`). Of course, their location can be customized, e.g., to the Windows 7 *Public Documents* folder).

The required ownership of and permissions to NDSR *User Data* are the same on Windows 7. On Windows 7 it is even more important to get them right before running NDSR (especially after installing earlier versions of NDSR); otherwise there might be problems with Windows File Virtualization.

After NDSR has been installed, the NCC *Public Documents* folder may be revealed and its required permissions verified or set as described below.

Verify permissions:

1. Open **Windows Explorer** and locate the NCC *Public documents* folder `C:\Users\Public\Public Documents\NCC\`

2. Right-click on this folder.

3. Select **Properties** from the popup menu.

4. On the **Security** tab (and its advanced windows if necessary), verify that the Administrators group has ownership and Full Control of this folder and all of its child objects.

5. Verify that the SYSTEM account has full control (of this folder and all of its child objects).

6. Verify that the Users group has the following permissions (in this folder and all of its child objects): Modify, Read & Execute, List Folder Contents, Read, and Write.

7. Verify that no user or group in which an NDSR user or administrator is a member (including Everyone) lacks any of the required permissions.

Ghostscript Printer

NDSR saves reports as PDF files using the open-source Ghostscript software and a special Windows "printer" named "Sybase Datawindow PS". NDSR now installs this printer automatically, but if necessary, it can be recreated as follows:

1. Select **Start→Control Panel→Hardware and Sound→Printer** (**Devices and Printers** in Windows 7).

2. Select **ADD A PRINTER**. The **Add Printer** window opens.

3. On the **Choose a local or network printer** window, select **ADD A LOCAL PRINTER**. Select the **NEXT** button.

4. On the **Choose a printer port** window, select the **USE AN EXISTING PORT:** radio button and select **FILE: (PRINT TO FILE)** from the drop-down menu. Select the **NEXT** button.

5. On the **Install the printer driver** window, select the **HAVE DISK** button.

6. On the **Install From Disk** window browse to the following file: `C:\Program Files\gs\gs8.61\lib\ghostpdf`. Select the open button to return to the **Install From Disk** window. Select the **OK** button.

7. The **Add Printer** window appears and Ghostscript PDF is listed under the **Printers** pane. Select the **NEXT** button.

8. The **Type a printer name** window appears. Enter "`Sybase Datawindow PS`" as the `Printer name`. Do not set this as the default printer. Select the **NEXT** button to install the printer.

9. On the **Windows Security** window select **INSTALL THIS DRIVER SOFTWARE ANYWAY**.

10. The **Add Printer** window opens to confirm that "You've successfully added Sybase Datawindow PS". Select the **FINISH** button.

11. Again select **Start→Control Panel→Hardware and Sound→Printer** (**Devices and Printers** in Windows 7) to view the list of printers and confirm the addition of `Sybase Datawindow PS`.

Installing NDSR, non-networked (Stand-alone)

The NDSR installation has been programmed so that on Windows 7, you need to follow these prompts and then complete several steps manually (see "*Windows 7Public Documents Folder*").

After NDSR is installed, it must be registered (please read "*Previous NDSR Registrations*" and "*Registering NDSR*" before installing).

The following steps describe how to install NDSR.

1. Login as a member of the Administrators group. Close any open applications.

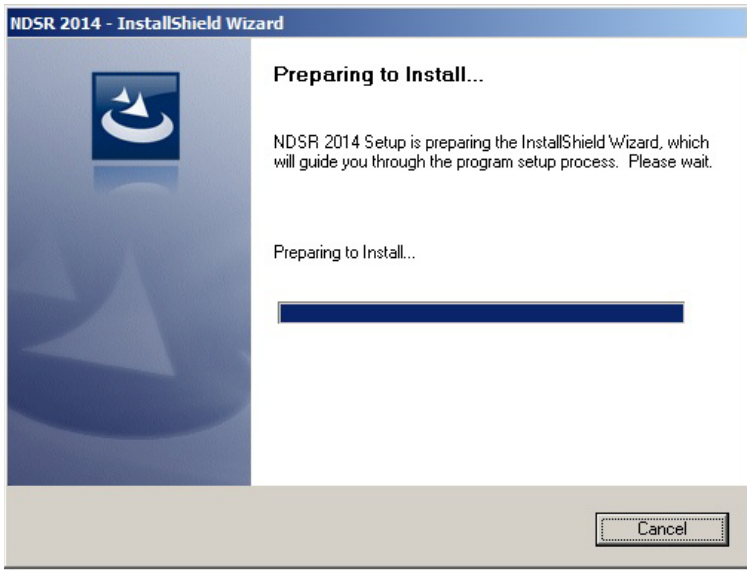
2. Put the CD into the CD or DVD drive.

3. If the installation process does not begin automatically, start it as follows:
   a. Select **Start→Run**, type `D:/setup` (where `D:` is the CD or DVD drive) and select **OK** OR

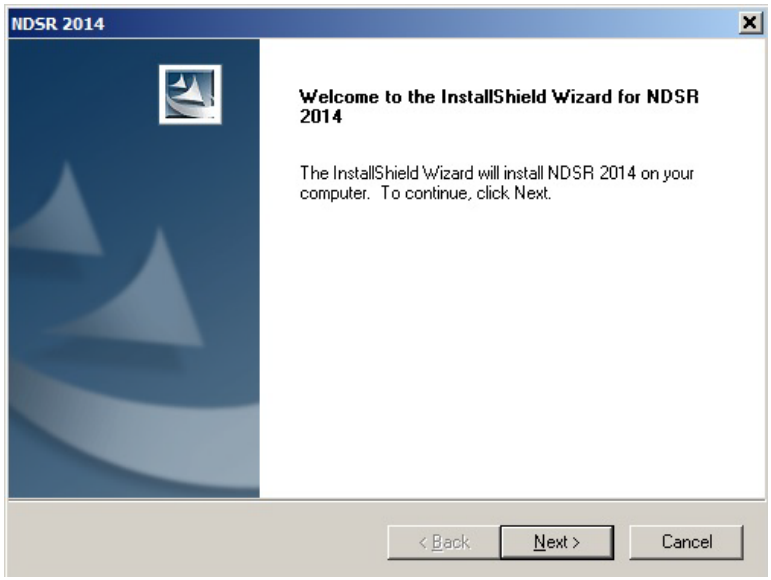
   b. In **My Computer**, go to the CD or DVD drive and open the file `setup.exe`.

NOTE: To find your CD or DVD drive letter, select **Start→Run** and select the **BROWSE** button or go to **My Computer** or **Windows Explorer**.

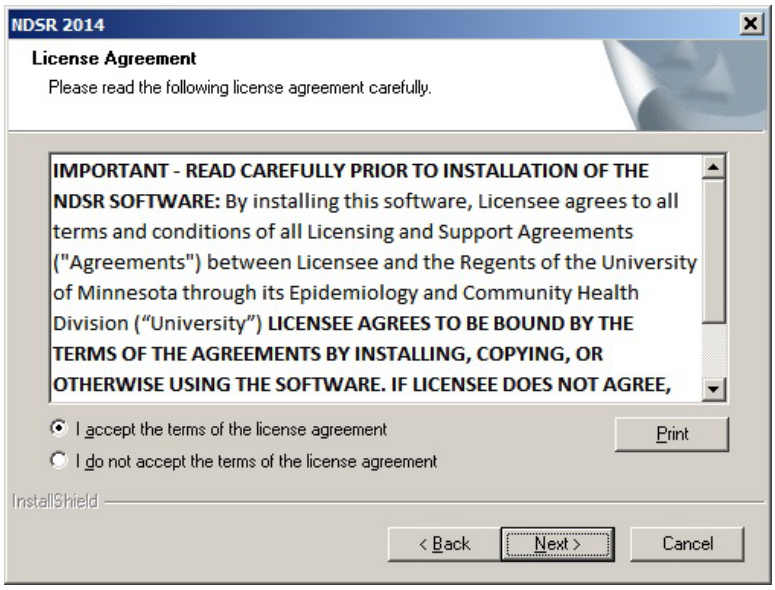
The **InstallShield Wizard** window will open


NDSR 2014 - InstallShield Wizard
Preparing to Install...
NDSR 2014 Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Preparing to Install...
Cancel

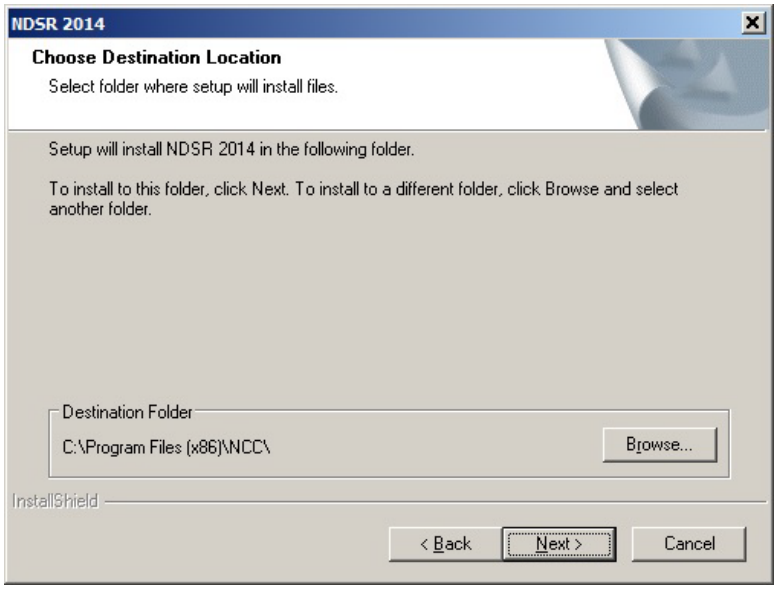
4. When the **Welcome** window opens, select the **NEXT>** button.


NDSR 2014
Welcome to the InstallShield Wizard for NDSR 2014
The InstallShield Wizard will install NDSR 2014 on your computer. To continue, click Next.
< Back
Next >
Cancel

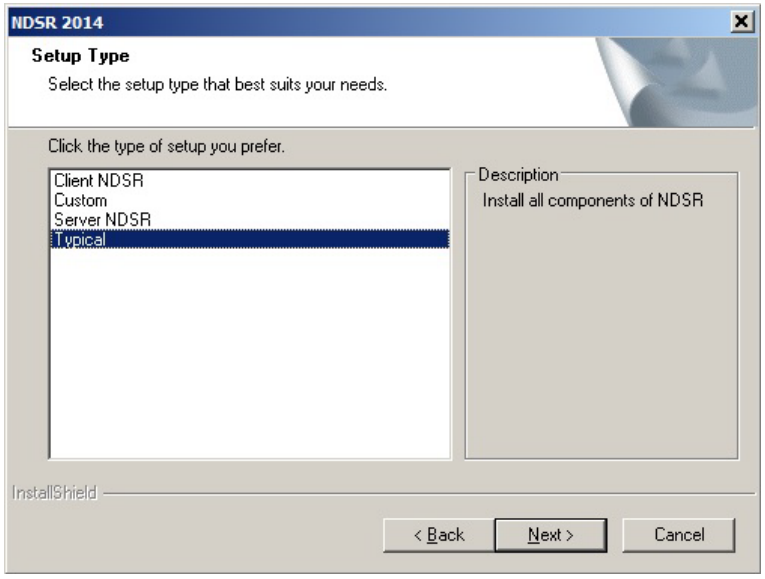
5. When the **License Agreement** window opens, select the radio button **I ACCEPT THE TERMS OF THE LICENSE AGREEMENT**, and select the **NEXT**> button.


NDSR 2014
License Agreement
Please read the following license agreement carefully.
IMPORTANT - READ CAREFULLY PRIOR TO INSTALLATION OF THE NDSR SOFTWARE: By installing this software, Licensee agrees to all terms and conditions of all Licensing and Support Agreements ("Agreements") between Licensee and the Regents of the University of Minnesota through its Epidemiology and Community Health Division ("University") LICENSEE AGREES TO BE BOUND BY THE TERMS OF THE AGREEMENTS BY INSTALLING, COPYING, OR OTHERWISE USING THE SOFTWARE. IF LICENSEE DOES NOT AGREE,
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

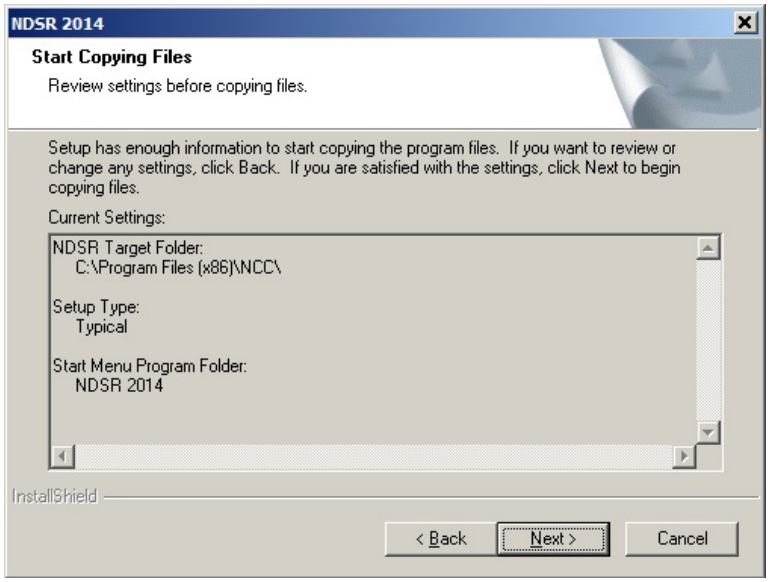
6. When the **Choose Destination Location** window opens, accept or change the destination folder and select the **NEXT**> button. The default destination folder is `C:\Program Files\NCC\` or `C:\Program Files(x86)\NCC\` for 64-bit systems.


NDSR 2014
Choose Destination Location
Select folder where setup will install files.
Setup will install NDSR 2014 in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files (x86)\NCC\
Browse...
InstallShield
< Back
Next >
Cancel

7. When the **Setup Type** window opens, select `Typical` setup and select the **NEXT**> button.

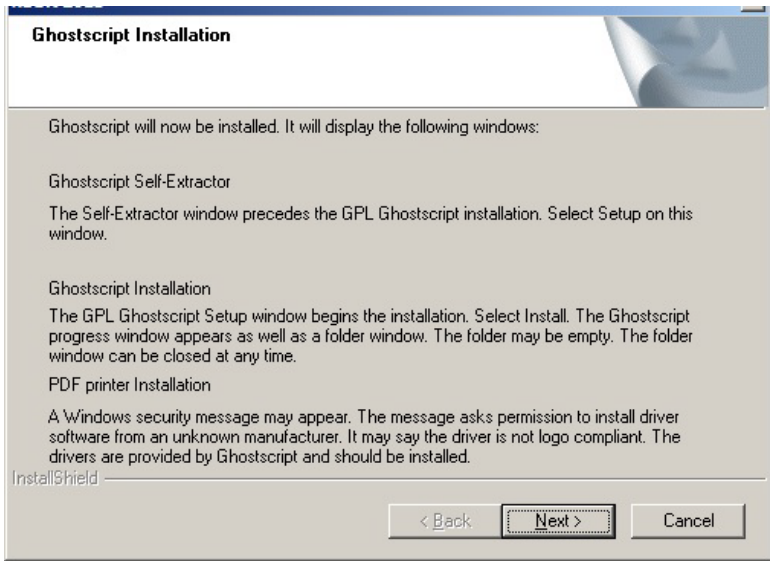


8. When the **Start Copying Files** window opens, select the **NEXT**> button.


NDSR 2014
Start Copying Files
Review settings before copying files.
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
NDSR Target Folder:
C:\Program Files (x86)\NCC\
Setup Type:
Typical
Start Menu Program Folder:
NDSR 2014
InstallShield
< Back
Next >
Cancel

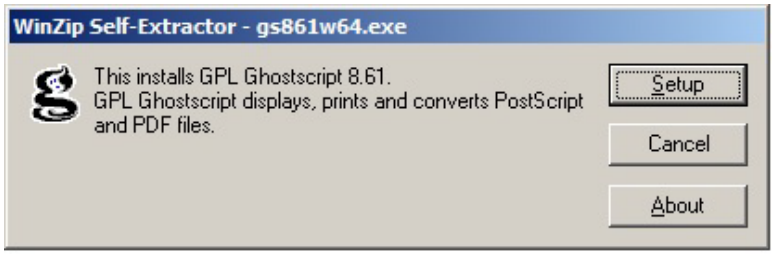
The **Setup Status** window is displayed while the NDSR program files are copied from the installation CD to your computer's hard drive.

9. When the **Ghostscript Installation** window opens, select the **NEXT>** button.

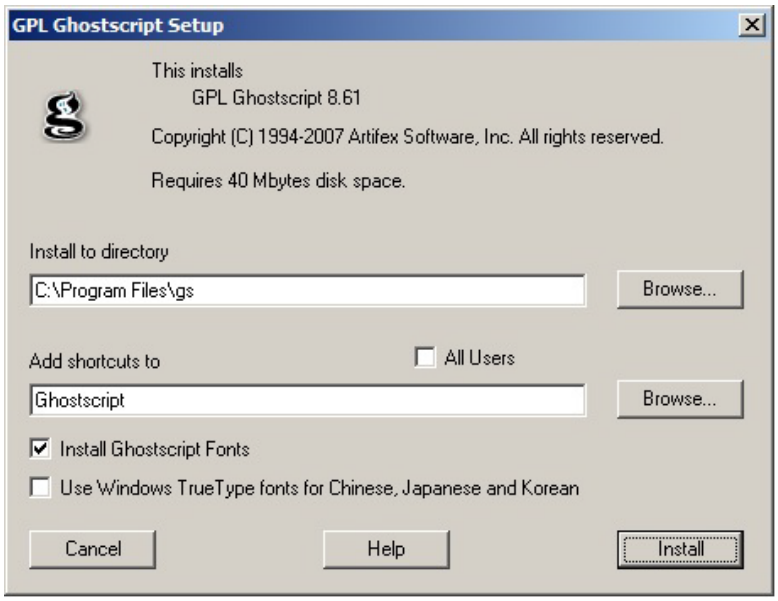

Ghostscript Installation
Ghostscript will now be installed. It will display the following windows:
Ghostscript Self-Extractor
The Self-Extractor window precedes the GPL Ghostscript installation. Select Setup on this window.
Ghostscript Installation
The GPL Ghostscript Setup window begins the installation. Select Install. The Ghostscript progress window appears as well as a folder window. The folder may be empty. The folder window can be closed at any time.
PDF printer Installation
A Windows security message may appear. The message asks permission to install driver software from an unknown manufacturer. It may say the driver is not logo compliant. The drivers are provided by Ghostscript and should be installed.
InstallShield
< Back
Next >
Cancel

10. When the **GPL Ghostscript Self-Extractor** window opens, select the **SETUP** button.

    Ghostscript is the software that saves NDSR reports as PDF files.



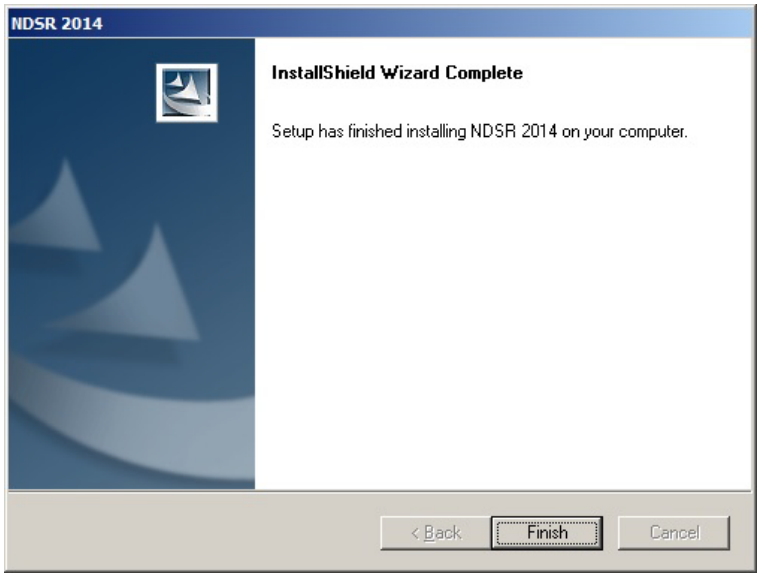
11. When the **GPL Ghostscript Setup** window opens, select the **INSTALL** button.



12. When the **Windows Explorer** window opens on the Ghostscript start menu, close the window.

13. When the **InstallShield Wizard Complete** window opens, select **FINISH**.

    This completes the installation process.

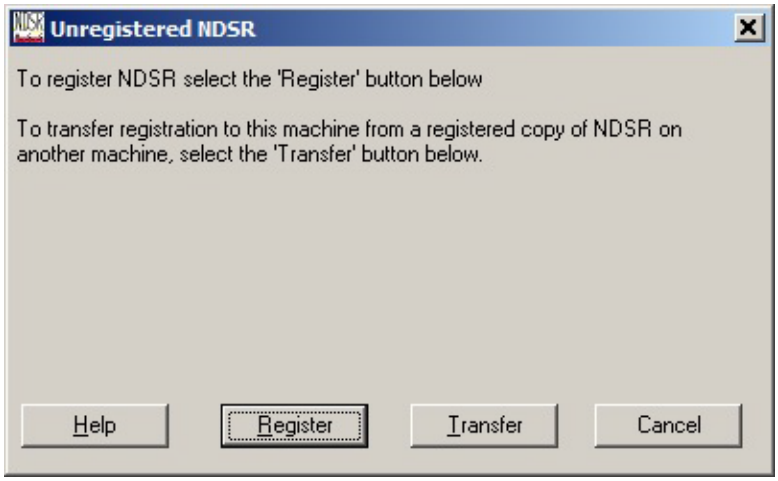


Registering NDSR

After NDSR is installed, each license must be registered by obtaining a computer-specific password from NCC. If there is more than one non-networked license, this process is repeated for each one. If there is a single networked license, this process is done only once.

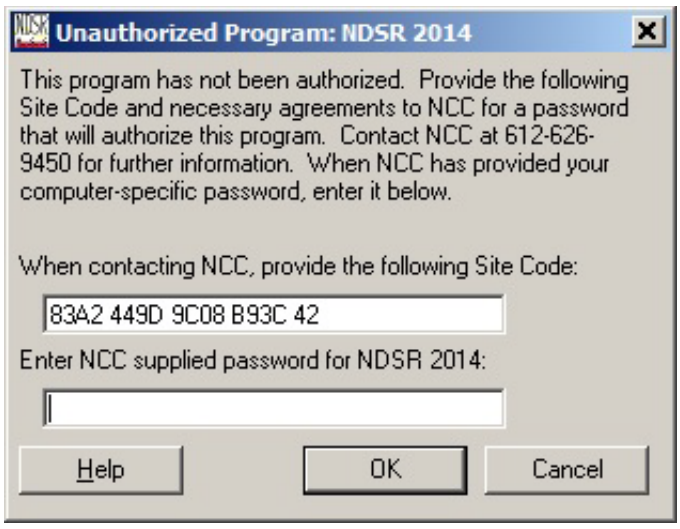
The following steps describe how to register NDSR.

1. Select **Start→Programs→NDSR 2014→NDSR**. When the **Unregistered NDSR** window opens, select the **REGISTER** button.


Unregistered NDSR
To register NDSR select the 'Register' button below
To transfer registration to this machine from a registered copy of NDSR on another machine, select the 'Transfer' button below.
Help
Register
Transfer
Cancel

NOTE: If any message windows open before the **Unregistered NDSR** window, report them to NCC.

2. When the **Unauthorized Program: NDSR 2014** window opens, call NCC at 612-626-9450 and provide the `Site Code`. NCC will provide you with the `Password`.


Unauthorized Program: NDSR 2014
This program has not been authorized. Provide the following Site Code and necessary agreements to NCC for a password that will authorize this program. Contact NCC at 612-626-9450 for further information. When NCC has provided your computer-specific password, enter it below.
When contacting NCC, provide the following Site Code:
83A2 449D 9C08 B93C 42
Enter NCC supplied password for NDSR 2014:
Help
OK
Cancel

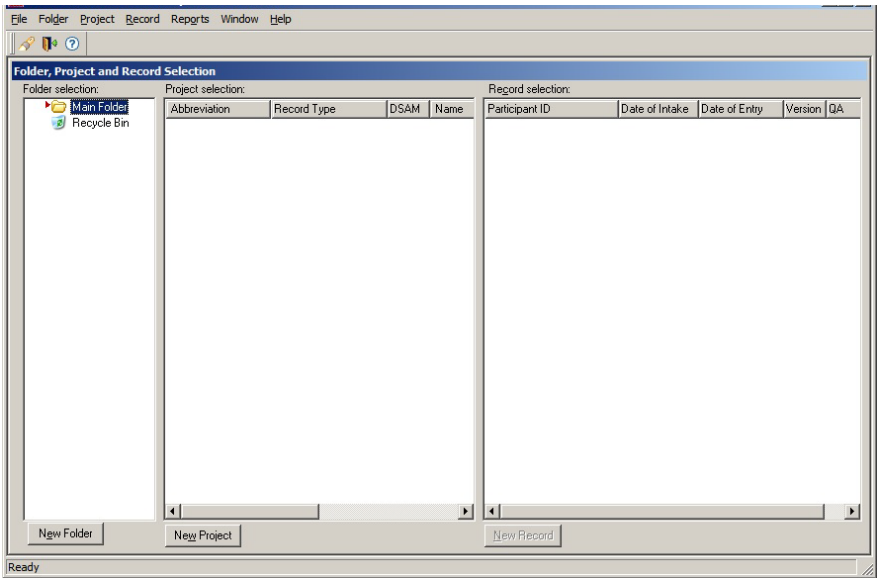
3. Enter the `NCC supplied password` and select **OK**. NDSR will open.

Starting NDSR

The following steps describe how to start NDSR.

1. Select **Start→Programs→NDSR 2014→NDSR**.

2. When the **Nutrition Data System for Research** logo window opens, wait a few moments for the **Folder, Project and Record Selection** window to open.



3. Create a new project according to "*Appendix 4, NDSR Tutorials*" or "*Chapter 3, Managing NDSR Projects*".

NOTE: Projects and records created in one registration type (e.g., Demonstration) cannot be moved to a different registration type (e.g., Research).

Transferring NDSR Registration

You may move a registered copy of NDSR from one computer to another (or move the license folder from one drive or folder to another on the same computer) by transferring the NDSR registration.

The following steps describe how to transfer NDSR registration from the *sending* computer (e.g., the computer from which NDSR will be removed) to the *receiving* computer (e.g., the computer to which NDSR will be moved).

1. On the *receiving* computer, insert a removable drive (e.g., a USB flash drive) or open a network drive and create your temporary, empty *license-transfer folder* on it. The NDSR registration will be transferred through this folder in a later step.

NOTE: A CD or DVD drive will not work for this transfer, even if the recording software is compatible on the two computers.

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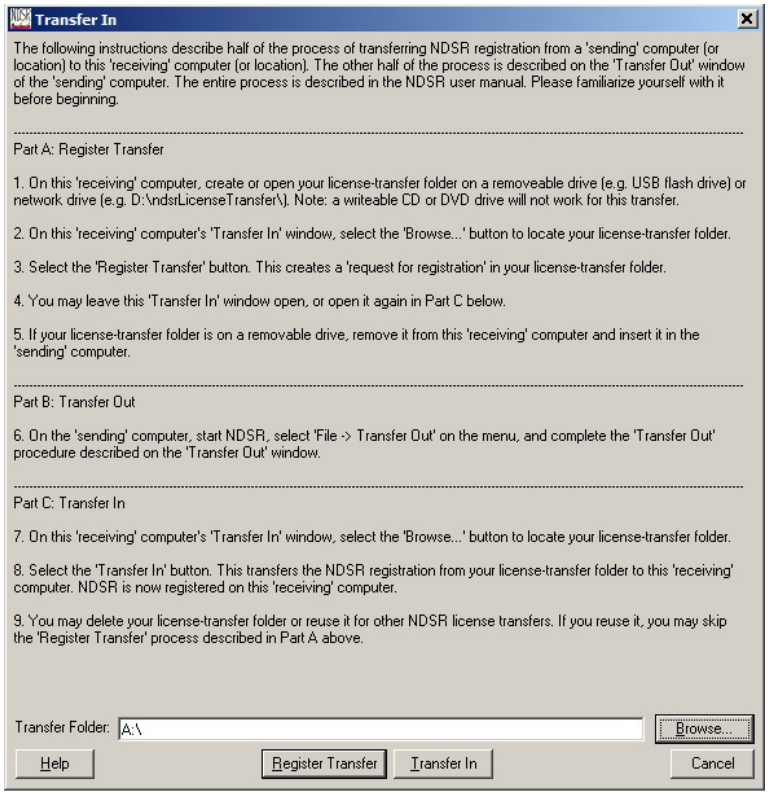
2. On the *receiving* computer, install and start NDSR (see "*Installing NDSR, non-networked*" and "*Starting NDSR*").

3. When the **Unregistered NDSR** window opens, select the **TRANSFER** button.

4. When the **Transfer In** window opens, specify the license-transfer folder you created in Step 1 in the `Transfer Folder:` field.

   Select the **REGISTER TRANSFER** button. This creates a "request for registration" in your license-transfer folder. You may leave this window open until you return to it in a later step.

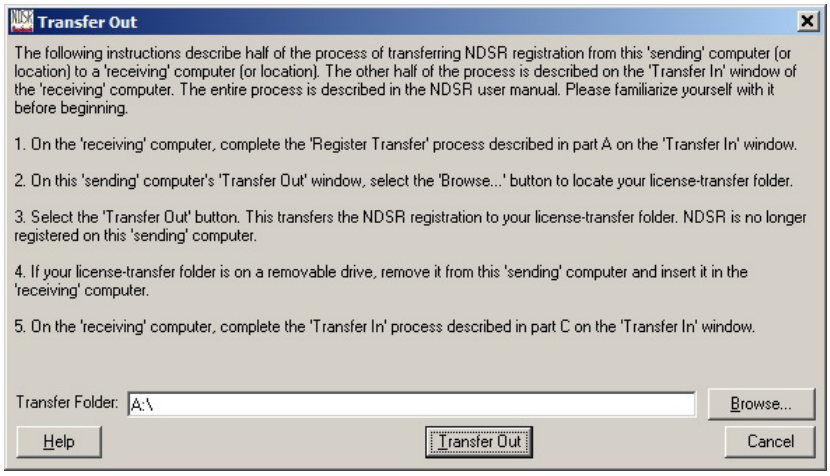

Transfer In
The following instructions describe half of the process of transferring NDSR registration from a 'sending' computer (or location) to this 'receiving' computer (or location). The other half of the process is described on the 'Transfer Out' window of the 'sending' computer. The entire process is described in the NDSR user manual. Please familiarize yourself with it before beginning.
Part A: Register Transfer
1. On this 'receiving' computer, create or open your license-transfer folder on a removeable drive (e.g. USB flash drive) or network drive (e.g. D:\ndsrLicenseTransfer\). Note: a writeable CD or DVD drive will not work for this transfer.
2. On this 'receiving' computer's 'Transfer In' window, select the 'Browse...' button to locate your license-transfer folder.
3. Select the 'Register Transfer' button. This creates a 'request for registration' in your license-transfer folder.
4. You may leave this 'Transfer In' window open, or open it again in Part C below.
5. If your license-transfer folder is on a removable drive, remove it from this 'receiving' computer and insert it in the 'sending' computer.
Part B: Transfer Out
6. On the 'sending' computer, start NDSR, select 'File -> Transfer Out' on the menu, and complete the 'Transfer Out' procedure described on the 'Transfer Out' window.
Part C: Transfer In
7. On this 'receiving' computer's 'Transfer In' window, select the 'Browse...' button to locate your license-transfer folder.
8. Select the 'Transfer In' button. This transfers the NDSR registration from your license-transfer folder to this 'receiving' computer. NDSR is now registered on this 'receiving' computer.
9. You may delete your license-transfer folder or reuse it for other NDSR license transfers. If you reuse it, you may skip the 'Register Transfer' process described in Part A above.
Transfer Folder:
A:\
Browse...
Help
Register Transfer
Transfer In
Cancel

5. From the *receiving* computer, remove the USB flash drive (if that is the location of your license-transfer folder). Into the *sending* computer, insert the USB flash drive (or otherwise open your license-transfer folder).

6. On the *sending* computer, Start NDSR. When the **Folder, Project and Record Selection** window opens, select **File→Transfer Out** on the menu.

7. When the **Transfer Out** window opens, specify your license-transfer folder in the `Transfer Folder:` field.

   Select the **TRANSFER OUT** button. This transfers the NDSR registration from the *sending* computer to your license-transfer folder. NDSR is no longer registered on the *sending* computer.


Transfer Out
The following instructions describe half of the process of transferring NDSR registration from this 'sending' computer (or location) to a 'receiving' computer (or location). The other half of the process is described on the 'Transfer In' window of the 'receiving' computer. The entire process is described in the NDSR user manual. Please familiarize yourself with it before beginning.
1. On the 'receiving' computer, complete the 'Register Transfer' process described in part A on the 'Transfer In' window.
2. On this 'sending' computer's 'Transfer Out' window, select the 'Browse...' button to locate your license-transfer folder.
3. Select the 'Transfer Out' button. This transfers the NDSR registration to your license-transfer folder. NDSR is no longer registered on this 'sending' computer.
4. If your license-transfer folder is on a removable drive, remove it from this 'sending' computer and insert it in the 'receiving' computer.
5. On the 'receiving' computer, complete the 'Transfer In' process described in part C on the 'Transfer In' window.
Transfer Folder:
A:\
Browse...
Help
Transfer Out
Cancel

8. From the *sending* computer, remove the USB flash drive (if that is the location of your license-transfer folder). Into the *receiving* computer, insert the USB flash drive (or otherwise open your license-transfer folder).

9. On the *receiving* computer, go to the **Transfer In** window.

NOTE: If you did not leave this window open in the earlier step, you may open it again by starting the NDSR program. When the **Unregistered NDSR** window opens, select the **TRANSFER** button. When the **Transfer In** window opens, specify your license-transfer folder in the `Transfer Folder:` field.

Select the **TRANSFER IN** button. This transfers the NDSR registration from your license-transfer folder to the *receiving* computer. NDSR is now registered on the *receiving* computer, and the transfer is complete.

You may delete your license-transfer folder or save it for transferring another license.

Unregistering NDSR

You may unregister NDSR in order to change from one license configuration to another (e.g., to consolidate a number of non-networked licenses into a single networked license, see "*Installing NDSR, Networked License*"). For each license that is unregistered, a confirmation code must be sent to NCC so that NCC can provide a replacement license.

NOTE: Do not uninstall NDSR until you have unregistered it. Without a confirmation code, you will not be able to re-register NDSR.

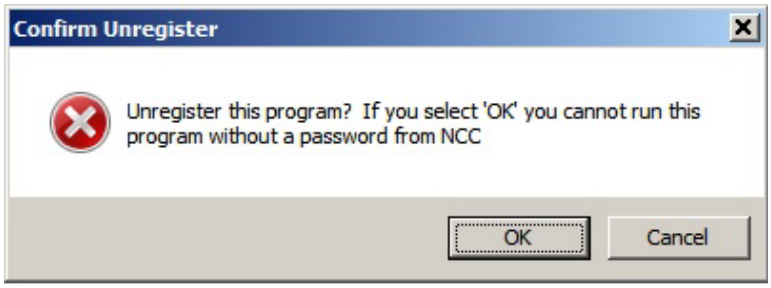
Do not uninstall NDSR until you have backed up your projects (see backup and restore in "*Chapter 9, NDSR Utilities*").

The following steps describe how to unregister NDSR.

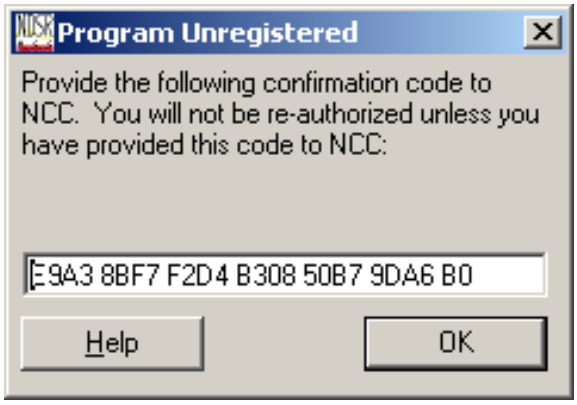
1. Start NDSR.

2. When the **Folder, Project and Record Selection** window opens, press **CTRL** + **ALT** + **SHIFT** + **K** on the keyboard, all at the same time.

3. When the **Confirm Unregister** window opens, select **OK**.


Confirm Unregister
Unregister this program? If you select 'OK' you cannot run this program without a password from NCC
OK
Cancel

4. When the **Program Unregistered** window opens, carefully record the confirmation code. Select **OK** to unregister NDSR on this computer.


Program Unregistered
Provide the following confirmation code to NCC. You will not be re-authorized unless you have provided this code to NCC:
E9A3 8BF7 F2D4 B308 50B7 9DA6 B0
Help
OK

   Send this confirmation code to NCC by email at ndsrhelp@umn.edu or by phone at 612-626-9450. NCC will then give you a password to re-register NDSR on another computer.

5. Uninstall NDSR (see "*Uninstalling NDSR*").

Uninstalling NDSR

You may uninstall NDSR one version at a time. This allows you to move NDSR to a new computer, switch to a newer version, or end a study.

NDSR may be uninstalled only by a member of the Administrators group.

The following steps describe how to uninstall NDSR and optionally delete the NDSR folders.

1. Backup your projects (see backup and restore in "*Chapter 9, NDSR Utilities*").

2. If you are continuing with NDSR, unregister or transfer the license (see "*Unregistering NDSR*" or "*Transferring NDSR Registration*").

3. Select **Start→Settings→Control Panel**.

4. When the **Control Panel** window opens, select **ADD OR REMOVE PROGRAMS**.

5. Look for `NDSR 2014` in the list of programs, and highlight it. Select the **CHANGE/REMOVE** button.

6. When the **Welcome** window opens, select **REMOVE** and then the **NEXT**> button.

7. When the **Confirm Uninstall** window opens, select **OK**. NDSR is uninstalled.

8. When the **Maintenance Complete** window opens, select **FINISH**.

9. After backing up your data and uninstalling NDSR, you may want to delete the NDSR folders—including any database, backup, export, output or report files that remain in them. For your protection, these user files are not deleted when NDSR is uninstalled—they may only be deleted manually. On Windows 7, the default locations of the user files and program files are `C:\Users\Public\Public Documents\NCC\NDSR 2014\`, `C:\ProgramData\NCC\NDSR 2014\` and `C:\Program Files\NCC\NDSR 2014\` or `C:\Program Files (x86)\NCC\NDSR 2014` on 64-bit systems.

   If NDSR will not be reinstalled, its Crypkey License service may be uninstalled by opening a Windows command-line window, changing directories to the NDSR license folder, and executing the command "`setupex /u`".

Installing NDSR, Networked

NDSR can be networked so that users can share databases and/or a license. Potential advantages include centralized system administration and information sharing.

Networking requires an Amendment to your End User Software License Agreement with NCC, plus additional software installations as described below.

NCC supports NDSR networking on Windows Server operating systems in consultation with your local system administrators.

Note on required technical skills: networking the NDSR license and/or database requires technical knowledge beyond what is required for a "typical" NDSR installation. To network the license, it is necessary to set up a shared network folder (or service) on the server, install and register the license there, grant security permissions to NDSR users, and on each client computer map a drive (or refer to the service) and edit the NDSR configuration file. To network the database, it is necessary to configure and run a network database service, make firewall exceptions, modify environment variables, and on each client configure network connections, edit ODBC data sources, and edit the NDSR configuration file.

Note on terminology: the terms "*server*" and "*service*" are often interchanged, so let's define them briefly: a *server* is anything that provides a service (hardware, software, or human; directly or indirectly), and a *service* is something that is requested by a client and delivered to the client by the server. For example, a server machine for NDSR runs server software including the Crypkey license server and/or the Sybase SQL Anywhere personal or network database server. Another server machine will commonly be a file server. Each of these software servers operates with a number of components and processes including: 1) a server that provides a service and 2) a service that is requested and received by a client. The focus of a system-oriented person might be the server, and the only thing a user-oriented person might think about is the service; but both are correct. This NDSR User Manual needs to describe documentation from both viewpoints, and so will use the term "server" where the vendor uses it, and the term "service" where the NDSR installer works with it on the list of Windows services.

Installing NDSR, Networked License

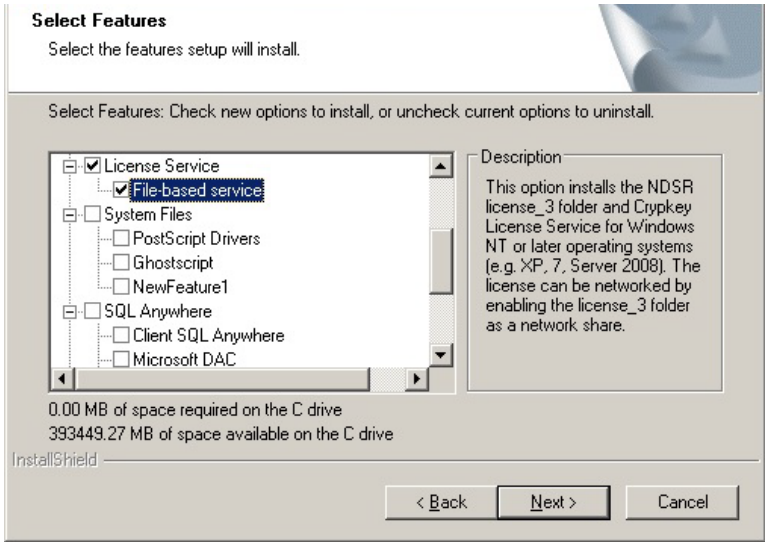
A networked license is installed on a server's shared network folder and referred to by each client computer through that client's NDSR configuration file.

To change the NDSR registration status from a non-networked license to a networked license see "*Unregistering NDSR*".

The following steps describe how to network the NDSR license using the file-based service.

1. On the server machine, install NDSR as described in "*Installing NDSR, non-networked*"). On the **Setup Type** window, choose one of the following options:
    a. To install the NDSR application along with the license folder and license service, run the `Typical` installation. OR

    b. To install only the license folder and license service, run the `Custom` installation. On the **Select Features** window under the category "`License Service`", select only the option "`File-based service`".


Select Features
Select the features setup will install.
Select Features: Check new options to install, or uncheck current options to uninstall.
License Service
File-based service
System Files
PostScript Drivers
Ghostscript
NewFeature1
SQL Anywhere
Client SQL Anywhere
Microsoft DAC
Description
This option installs the NDSR license_3 folder and Crypkey License Service for Windows NT or later operating systems (e.g. XP, 7, Server 2008). The license can be networked by enabling the license_3 folder as a network share.
0.00 MB of space required on the C drive
393449.27 MB of space available on the C drive
InstallShield
< Back
Next >
Cancel

2. On the server machine, after installing the license folder but before registering the license, optionally move the license folder out of NCC ProgramData to a location that is specialized for shared network folders. The license folder's default location is `C:\ProgramData\NCC\License_3` on Windows 7.

   On the server machine, share the license folder with NDSR users. Every NDSR user must have the following permissions for both the share and the folder (and of course the folder's contents): Modify, Read & Execute, List Folder Contents, Read, and Write. This involves two sets of permissions: one for the share and the other for the folder.

3. On each client machine, complete the following steps:
   a. On each client machine, run the `Typical` NDSR installation as described in "*Installing NDSR, non-networked*".

   b. On each client machine, map a network drive to the shared license folder, or determine how to address the server machine and its shared license folder using the Windows Universal Naming Convention (UNC, e.g., `\\myServerName\myShareName`)

   c. On each client machine, open the NDSR configuration file `ndsr.ini` and find the license path on the line with the default path of `License=C:\ProgramData\NCC\License_3` on Windows 7.

      The default location of the NDSR configuration file ndsr.ini is `C:\ProgramData\NCC\NDSR 2014` on Windows 7.

   d. In the NDSR configuration file that was opened in the previous step, change the license path so that it addresses the shared license folder.

      The license path may be specified in any of the following ways (UNC or mapped network drive):
      - `\\myServerIPAddress\myShare\myLicenseFolder`
      - `\\myServerName\myShare\myLicenseFolder`

- `myMappedDriveLetter:\myLicenseFolder`

e. On one client machine, start NDSR and register the license (as described in "*Registering NDSR*". This will register NDSR on all of the client computers.

NOTE: Unregistering NDSR on any client computer will unregister NDSR on all of the client computers.

Installing NDSR, Networked License and Database

Installing NDSR with a networked database and license is done in three parts.

- Part 1: NDSR `Server` installation.
- Part 2: Sybase SQL Anywhere installation.
- Part 3: NDSR `Client` installations.

Part 1: NDSR Server Installation

To network the NDSR license, run the Server installation of NDSR (or the Custom installation of the License Service) as described in "*Installing NDSR, Networked License*".

To network the NDSR database, run the Server installation of NDSR or otherwise copy an installed NDSR database file to the database server (Do not grant any user access to the database folder).

Part 2: SQL Anywhere Installation

The following steps describe how to install Sybase SQL Anywhere and configure it to run a network database service.

1. NDSR databases are networked by the Sybase SQL Anywhere software, which is provided and licensed by Sybase Inc. (not by NCC). A license for one network seat is required for each concurrent NDSR user. Qualifying faculty and students can obtain a free license for the SQL Anywhere Educational Edition, which provides all of the commercial features including those that are required by NDSR.

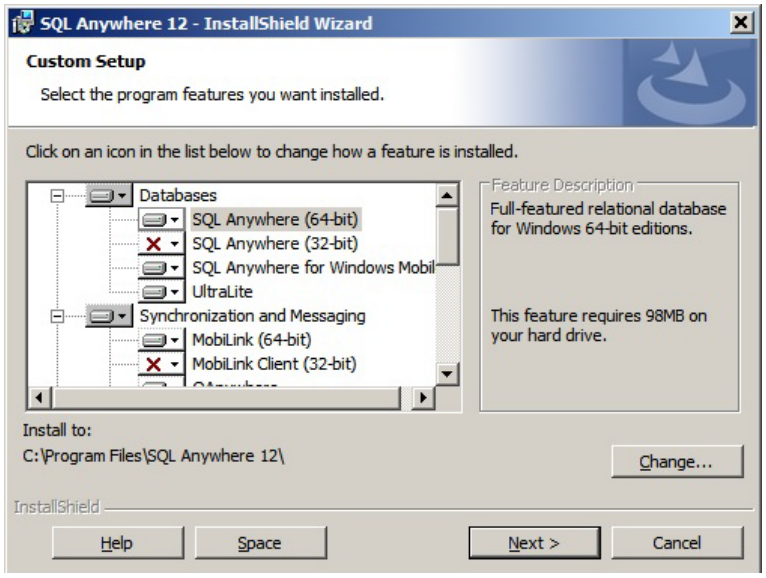
   Obtain the necessary number of licenses, and download Sybase SQL Anywhere from the Sybase Product Download Center at https://sybase.subscribenet.com/control/sybs/login.

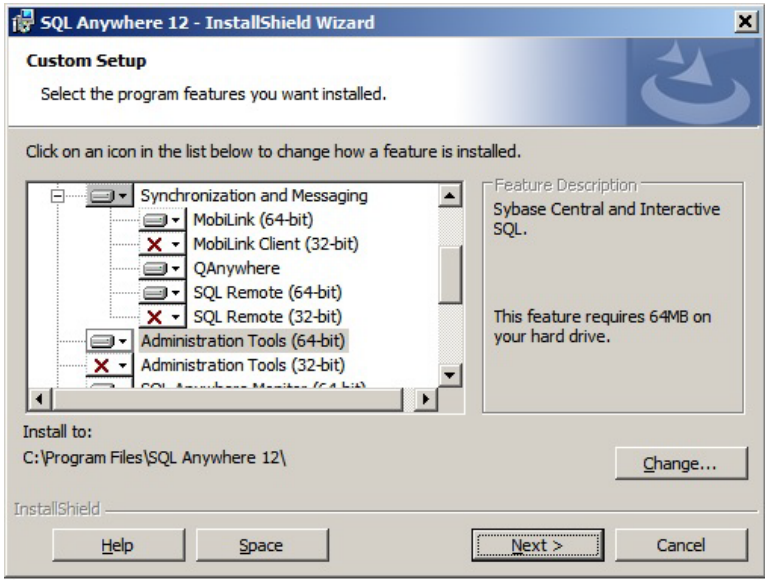
   Or download your licensed version of the SQL Anywhere Educational Edition (free of charge to qualifying faculty and students) at https://global.sap.com/campaign/ne/sybase/sql_anywhere_12_educational_edition/index.epx?kNtBzmUK9zU.

2. Install SQL Anywhere.

   When choosing installation options, keep in mind that the UltraLite, MobiLink and SQLRemote components are not used by NDSR. If you do not require them for other applications, do not install them.

   The following two screenshots show the recommended installation options (the first showing the top and the second the bottom of the option list).





Complete the installation by restarting Windows on the server.

3. Optionally, install patches to SQL Anywhere.

NOTE: This step is not required. The version that is tested by NCC is 12.0.1.3152, the version downloaded from the Sybase Product Download Center. You may need to apply the latest patches for security or performance reasons.

---

a. Navigate to the download website at http://downloads.sybase.com/swd/base.do, and login with a registered email address and password.

b. Follow the link to “SQL Anywhere”.

c. If necessary to find an older patch, display all platforms for all months.

d. Scroll down to the section of the desired server operating system. Windows downloads are under “Platform: Windows x86/Windows x64”.

e. Scroll down to the desired “SQL Anywhere - Express Bug Fix" or "SQL Anywhere Maintenance Release".

f. Follow the link to the license agreement.

g. Accept the license agreements and continue to the download page.

h. Download and read the documentation (readMe) file.

i. Download the patch installation file.

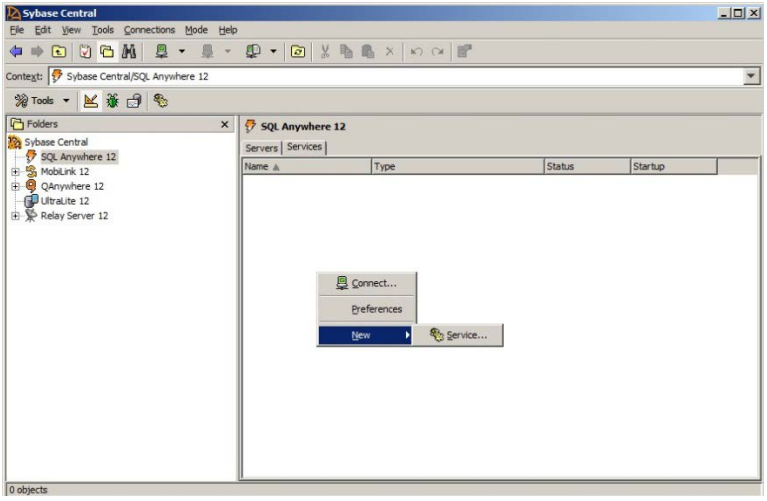
j. Install the patch in the same way as the SQL Anywhere version in the previous step.

4. To improve server efficiency, optionally remove the paths of earlier SQL Anywhere (or Adaptive Server Anywhere as it was formerly known) installations from the environment variable "PATH".

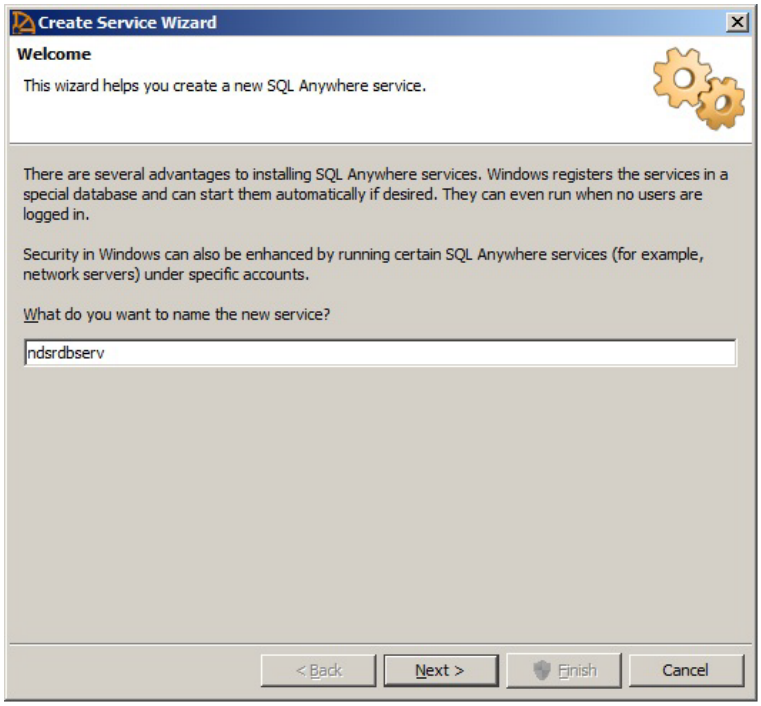
5. To further improve server performance, optionally create the environment variable "SATMP" to identify the folder in which the SQL Anywhere network database service will write its temporary files. This folder is best located on a hard drive with good capacity and speed.

6. Open Sybase Central by selecting **Start→Programs→SQL Anywhere 12→Administration Tools→Sybase Central**. When the **Sybase Central** window opens, select **View→Folders**, and select the item “SQL Anywhere 12” in the left pane.

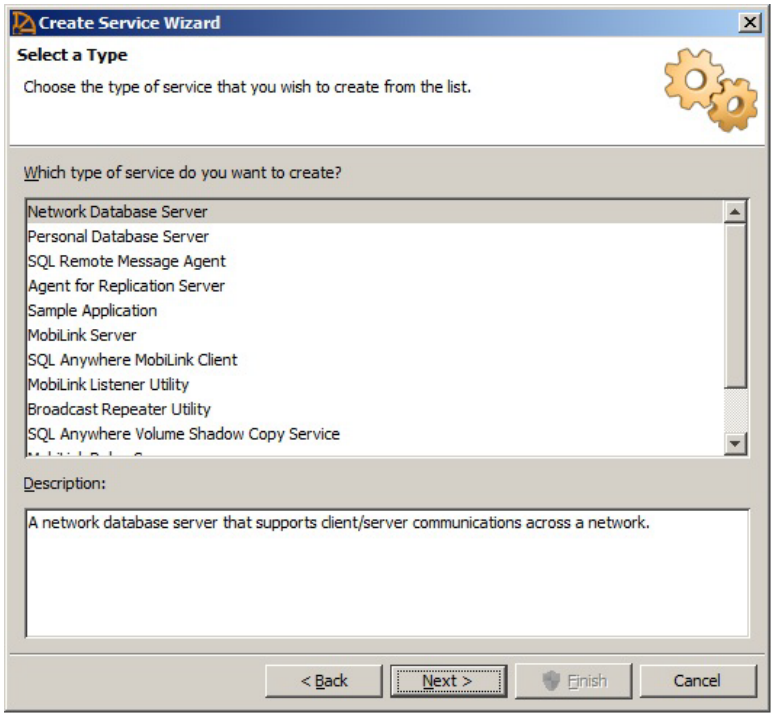
7. Select the **Services** tab on the right pane, right-click in the empty area of the pane, and select **File→New→Service** from the pop-up menu.



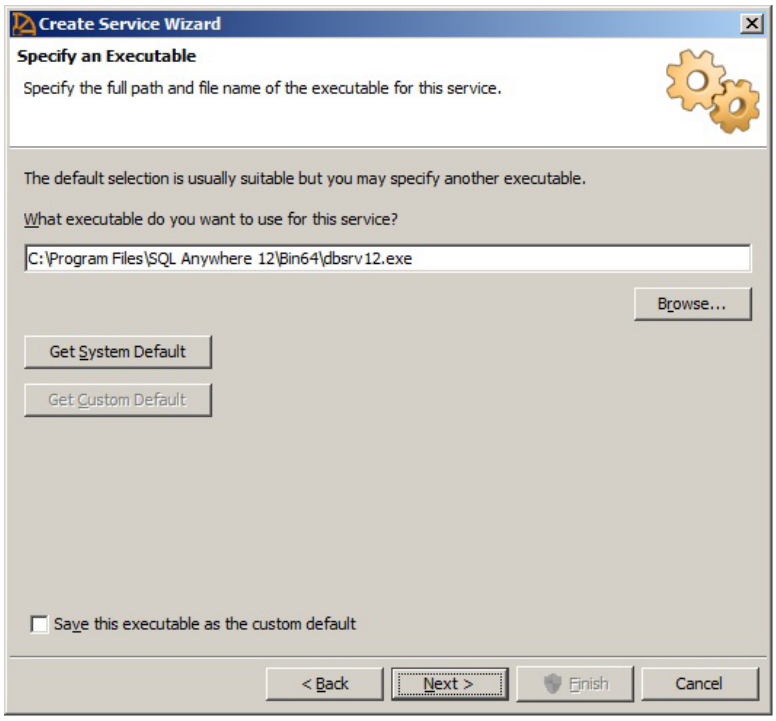
8. When the first **Create Service Wizard** window opens, name the new service `ndsrdbserv` and select the **NEXT>** button to continue.


Create Service Wizard
Welcome
This wizard helps you create a new SQL Anywhere service.
There are several advantages to installing SQL Anywhere services. Windows registers the services in a special database and can start them automatically if desired. They can even run when no users are logged in.
Security in Windows can also be enhanced by running certain SQL Anywhere services (for example, network servers) under specific accounts.
What do you want to name the new service?
ndsrdbserv
< Back
Next >
Finish
Cancel

9. On the next **Create Service Wizard** window, select `Network Database Server` and select the **NEXT**> button to continue.


Create Service Wizard
Select a Type
Choose the type of service that you wish to create from the list.
Which type of service do you want to create?
Network Database Server
Personal Database Server
SQL Remote Message Agent
Agent for Replication Server
Sample Application
MobiLink Server
SQL Anywhere MobiLink Client
MobiLink Listener Utility
Broadcast Repeater Utility
SQL Anywhere Volume Shadow Copy Service
Description:
A network database server that supports client/server communications across a network.
< Back
Next >
Finish
Cancel

10. On the next **Create Service Wizard** window, confirm that the executable file is `C:\Program Files\SQL Anywhere 12\bin32\dbsrv12.exe` on a 32-bit system or `C:\Program Files\SQL Anywhere 12\bin64\dbsrv12.exe` on a 64-bit system and select the **NEXT**> button to continue.


Create Service Wizard
Specify an Executable
Specify the full path and file name of the executable for this service.
The default selection is usually suitable but you may specify another executable.
What executable do you want to use for this service?
C:\Program Files\SQL Anywhere 12\Bin64\dbsrv12.exe
Browse...
Get System Default
Get Custom Default
Save this executable as the custom default
< Back
Next >
Finish
Cancel

11. On the next **Create Service Wizard** window, enter parameters like the following to name the service and each database it will run.

    For example, to network one NDSR 2014 database, enter parameters like the following (where "path" stands for the network database folder on your server).

    ```
    -n ndsrdbserv
    "path\ndsr 2014\database\ndsrdb.db" –n ndsrdb2014
    ```

    The default parameters on Windows 7 are as follows:

    ```
    -n ndsrdbserv
    "c:\ProgramData\ncc\ndsr 2014\database\ndsrdb.db" –n
    ndsrdb2014
    ```

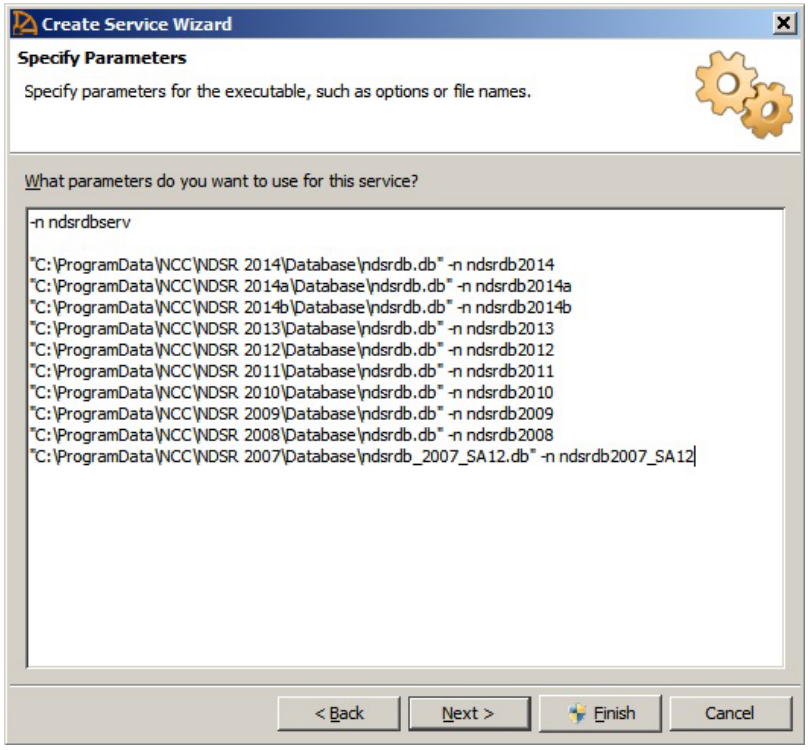
    To network more than one NDSR database, enter a separate line for each database. In the following example, the service named `ndsrdbserv` runs two NDSR 2014 databases, one NDSR 2013 database, one NDSR 2012 database, and one NDSR 2011 database.

```
-n ndsrdbserv

"path\ndsr2014\ndsrdb.db" –n ndsrdb2014
"path\ndsr2014A\ndsrdb.db" –n ndsrdb2014a
"path\ndsr2014B\ndsrdb.db" –n ndsrdb2014b
"path\ndsr2013\ndsrdb.db" –n ndsrdb2013
"path\ndsr2012\ndsrdb.db"  –n ndsrdb2012
"path\ndsr2011\ndsrdb.db"  –n ndsrdb2011
```

Select the **NEXT**> button to continue.

These parameters continue to be editable on the **Configuration** tab of the **Service Properties** window after the service has been created.


Create Service Wizard
Specify Parameters
Specify parameters for the executable, such as options or file names.
What parameters do you want to use for this service?
-n ndsrdbserv
"C:\ProgramData\NCC\NDSR 2014\Database\ndsrdb.db" -n ndsrdb2014
"C:\ProgramData\NCC\NDSR 2014a\Database\ndsrdb.db" -n ndsrdb2014a
"C:\ProgramData\NCC\NDSR 2014b\Database\ndsrdb.db" -n ndsrdb2014b
"C:\ProgramData\NCC\NDSR 2013\Database\ndsrdb.db" -n ndsrdb2013
"C:\ProgramData\NCC\NDSR 2012\Database\ndsrdb.db" -n ndsrdb2012
"C:\ProgramData\NCC\NDSR 2011\Database\ndsrdb.db" -n ndsrdb2011
"C:\ProgramData\NCC\NDSR 2010\Database\ndsrdb.db" -n ndsrdb2010
"C:\ProgramData\NCC\NDSR 2009\Database\ndsrdb.db" -n ndsrdb2009
"C:\ProgramData\NCC\NDSR 2008\Database\ndsrdb.db" -n ndsrdb2008
"C:\ProgramData\NCC\NDSR 2007\Database\ndsrdb_2007_SA12.db" -n ndsrdb2007_SA12
< Back
Next >
Finish
Cancel

12. On the next **Create Service Wizard** window, accept the default or select the account under which the service will run.

    On the next **Create Service Wizard** window, accept the default, "Automatic" startup type or select the service's startup type.

    On the final **Create Service Wizard** window, specify whether to start the service now, and then select the **FINISH** button to complete the **Wizard**.

    If you will run only NDSR 2008 or later databases on this service, you may start the service now and skip the next step.

    If you will run NDSR 2007 or earlier databases on this service, do not attempt to start the service now. Uncheck the option to start the service now, and select the **FINISH BUTTON** to complete the **Wizard**. The databases must first be updated for SQL Anywhere version 10 - 12 (SA10 - SA12) before they will run on this SA12 service (see the next step).

13. Update NDSR 2007 or earlier databases for SQL Anywhere version 10 - 12 (SA10 - SA12) and later.

    You may skip this step if you will run only NDSR 2008 or later databases on this service.

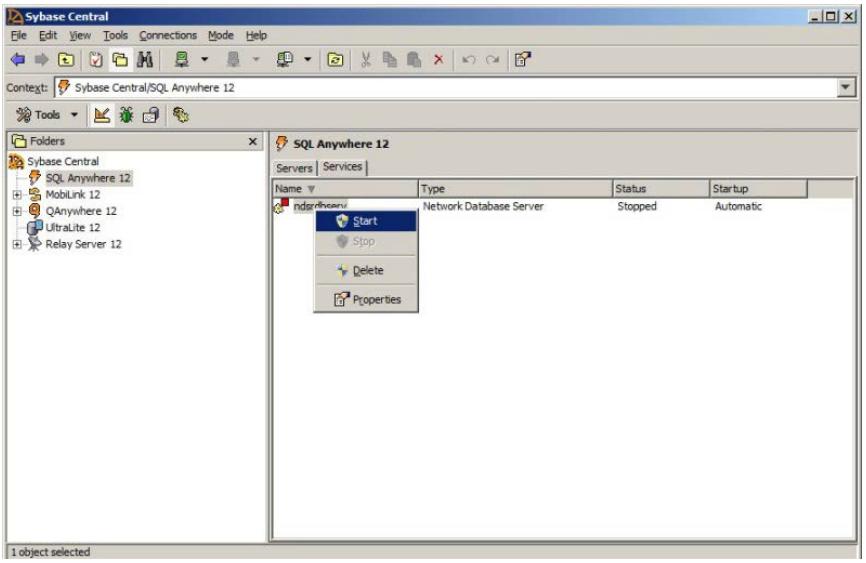
    Update each database and each client NDSR installation by running the "NDSR update for SA10 - SA12" (and later).

    a. Run the NDSR `custom` installation to install the "NDSR update for SA10 - SA12" (and later).

    b. Start the "NDSR update for SA10 - SA12" by running the executable file "`ndsrupdatesa10.exe`".

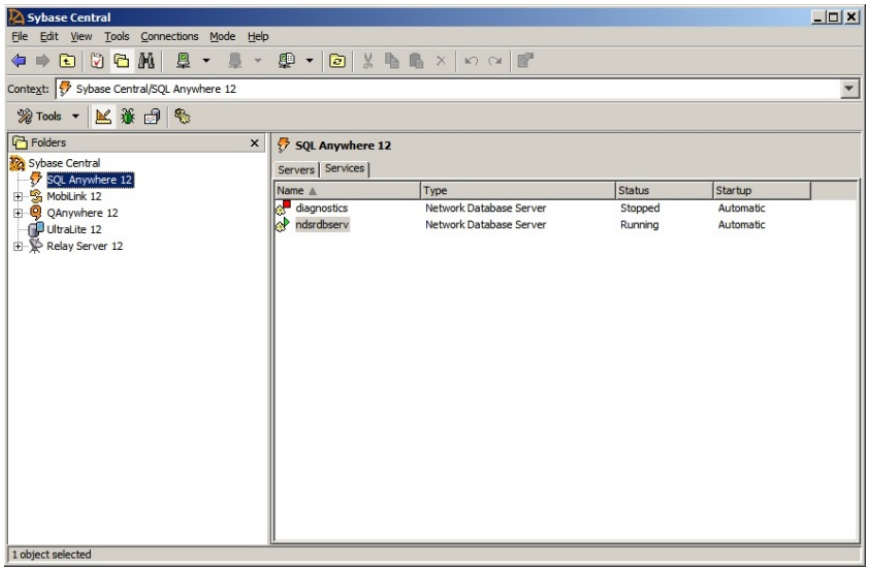
    c. When the **NDSR update for SA10 - SA12** window opens, select **Help→ Help Topics** from the menu and follow the instructions to complete the following updates of all client and server installations of NDSR 2007 or earlier:
        - Update each database on the server.
        - Update the INI file of each client NDSR installation.

14. Start the new network database service with the updated databases.



15. Confirm that the new service has been started. If the traffic-light icon is showing the green light, the service has been started and is running. If the icon is showing the red light, the service has not yet been started. To start the service, select the icon with the right mouse button and choose the **Start** command. If the startup type is "automatic", the service will be started automatically every time Windows is restarted on the server.

    If you make a connection to one of the databases (using the Connections menu), you can see and manage the other databases that are running on the service.

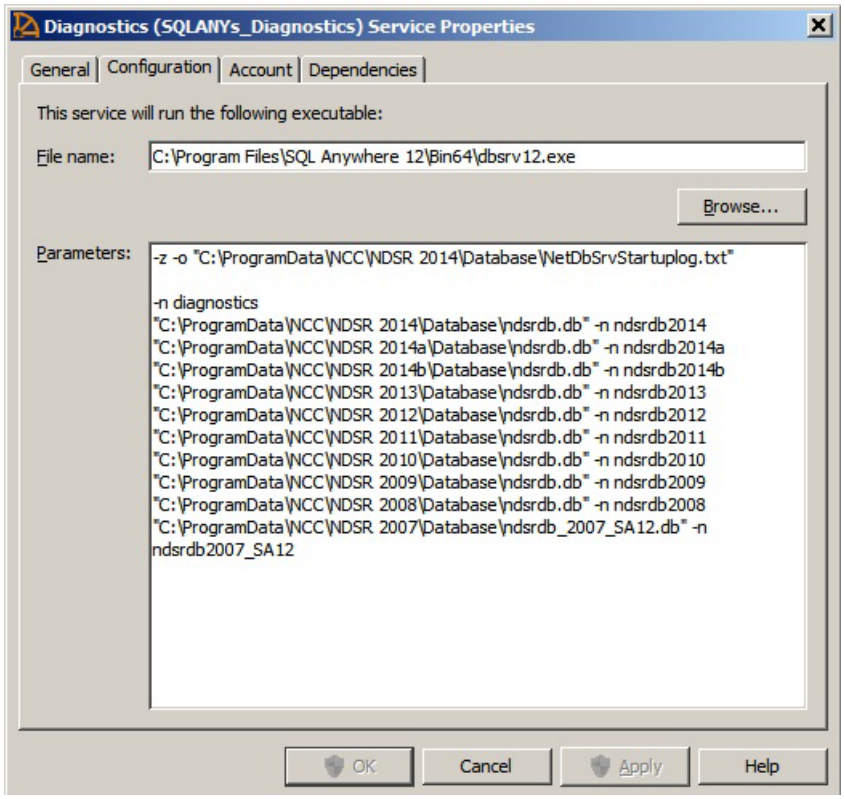


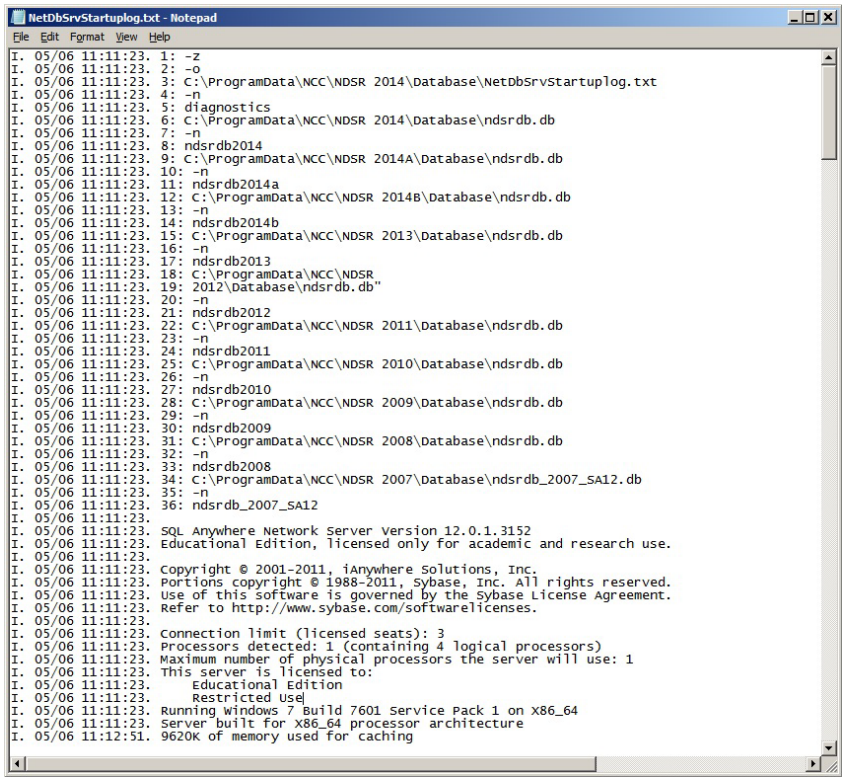
16. If necessary, allow a firewall exception for the SQL Anywhere network database service "`C:\Program Files\SQL Anywhere 12\bin32\dbsrv12.exe`" on 32-bit system or "`C:\Program Files\SQL Anywhere 12\bin64\dbsrv12.exe`" on a 64-bit system. The service must be able to listen for unsolicited incoming traffic from NDSR client database connections, by default on TCP port 2638.

    If another service is using TCP port 2638 on your server, the SQL Anywhere network database service can be switched to another port by inserting a parameter like "-x tcpip(port=2639)" as the first parameter on the **Configuration** tab of the **Service Properties** window. Each client ODBC data source will then need a TCP/IP parameter like "host=myServerNameOrAddress:2639" to find the network database service on the new port.

17. Close the **Sybase Central** window by selecting **File→Exit**.

    If you need to troubleshoot your network service, you can log startup and shutdown diagnostics to a file by inserting a parameter like "`-z -o C:\temp\mySqlAnywhereStartStopLog.txt`" as the first parameter on the **Configuration** tab of the **Service Properties** window.


Diagnostics (SQLANYs_Diagnostics) Service Properties
General
Configuration
Account
Dependencies
This service will run the following executable:
File name:
C:\Program Files\SQL Anywhere 12\Bin64\dbsrv12.exe
Browse...
Parameters:
-z -o "C:\ProgramData\NCC\NDSR 2014\Database\NetDbSrvStartuplog.txt"
-n diagnostics
"C:\ProgramData\NCC\NDSR 2014\Database\ndsrdb.db" -n ndsrdb2014
"C:\ProgramData\NCC\NDSR 2014a\Database\ndsrdb.db" -n ndsrdb2014a
"C:\ProgramData\NCC\NDSR 2014b\Database\ndsrdb.db" -n ndsrdb2014b
"C:\ProgramData\NCC\NDSR 2013\Database\ndsrdb.db" -n ndsrdb2013
"C:\ProgramData\NCC\NDSR 2012\Database\ndsrdb.db" -n ndsrdb2012
"C:\ProgramData\NCC\NDSR 2011\Database\ndsrdb.db" -n ndsrdb2011
"C:\ProgramData\NCC\NDSR 2010\Database\ndsrdb.db" -n ndsrdb2010
"C:\ProgramData\NCC\NDSR 2009\Database\ndsrdb.db" -n ndsrdb2009
"C:\ProgramData\NCC\NDSR 2008\Database\ndsrdb.db" -n ndsrdb2008
"C:\ProgramData\NCC\NDSR 2007\Database\ndsrdb_2007_SA12.db" -n
ndsrdb2007_SA12
OK
Cancel
Apply
Help


NetDbSrvStartuplog.txt - Notepad
File Edit Format View Help
I. 05/06 11:11:23. 1: -z
I. 05/06 11:11:23. 2: -o
I. 05/06 11:11:23. 3: C:\ProgramData\NCC\NDSR 2014\Database\NetDbSrvStartuplog.txt
I. 05/06 11:11:23. 4: -n
I. 05/06 11:11:23. 5: diagnostics
I. 05/06 11:11:23. 6: C:\ProgramData\NCC\NDSR 2014\Database\ndsrdb.db
I. 05/06 11:11:23. 7: -n
I. 05/06 11:11:23. 8: ndsrdb2014
I. 05/06 11:11:23. 9: C:\ProgramData\NCC\NDSR 2014A\Database\ndsrdb.db
I. 05/06 11:11:23. 10: -n
I. 05/06 11:11:23. 11: ndsrdb2014a
I. 05/06 11:11:23. 12: C:\ProgramData\NCC\NDSR 2014B\Database\ndsrdb.db
I. 05/06 11:11:23. 13: -n
I. 05/06 11:11:23. 14: ndsrdb2014b
I. 05/06 11:11:23. 15: C:\ProgramData\NCC\NDSR 2013\Database\ndsrdb.db
I. 05/06 11:11:23. 16: -n
I. 05/06 11:11:23. 17: ndsrdb2013
I. 05/06 11:11:23. 18: C:\ProgramData\NCC\NDSR
I. 05/06 11:11:23. 19: 2012\Database\ndsrdb.db"
I. 05/06 11:11:23. 20: -n
I. 05/06 11:11:23. 21: ndsrdb2012
I. 05/06 11:11:23. 22: C:\ProgramData\NCC\NDSR 2011\Database\ndsrdb.db
I. 05/06 11:11:23. 23: -n
I. 05/06 11:11:23. 24: ndsrdb2011
I. 05/06 11:11:23. 25: C:\ProgramData\NCC\NDSR 2010\Database\ndsrdb.db
I. 05/06 11:11:23. 26: -n
I. 05/06 11:11:23. 27: ndsrdb2010
I. 05/06 11:11:23. 28: C:\ProgramData\NCC\NDSR 2009\Database\ndsrdb.db
I. 05/06 11:11:23. 29: -n
I. 05/06 11:11:23. 30: ndsrdb2009
I. 05/06 11:11:23. 31: C:\ProgramData\NCC\NDSR 2008\Database\ndsrdb.db
I. 05/06 11:11:23. 32: -n
I. 05/06 11:11:23. 33: ndsrdb2008
I. 05/06 11:11:23. 34: C:\ProgramData\NCC\NDSR 2007\Database\ndsrdb_2007_SA12.db
I. 05/06 11:11:23. 35: -n
I. 05/06 11:11:23. 36: ndsrdb_2007_SA12
I. 05/06 11:11:23.
I. 05/06 11:11:23. SQL Anywhere Network Server Version 12.0.1.3152
I. 05/06 11:11:23. Educational Edition, licensed only for academic and research use.
I. 05/06 11:11:23.
I. 05/06 11:11:23. Copyright © 2001-2011, iAnywhere Solutions, Inc.
I. 05/06 11:11:23. Portions copyright © 1988-2011, Sybase, Inc. All rights reserved.
I. 05/06 11:11:23. Use of this software is governed by the Sybase License Agreement.
I. 05/06 11:11:23. Refer to http://www.sybase.com/softwarelicenses.
I. 05/06 11:11:23.
I. 05/06 11:11:23. Connection limit (licensed seats): 3
I. 05/06 11:11:23. Processors detected: 1 (containing 4 logical processors)
I. 05/06 11:11:23. Maximum number of physical processors the server will use: 1
I. 05/06 11:11:23. This server is licensed to:
I. 05/06 11:11:23. Educational Edition
I. 05/06 11:11:23. Restricted Use
I. 05/06 11:11:23. Running Windows 7 Build 7601 Service Pack 1 on X86_64
I. 05/06 11:11:23. Server built for X86_64 processor architecture
I. 05/06 11:12:51. 9620K of memory used for caching

Part 3: NDSR Client Installations

The following steps describe how to install NDSR on each client computer and connect it to the networked license and database.

1. Run the NDSR `Client` installation (see "*Installing NDSR, non-networked*").

2. Edit the license path in the NDSR configuration file `ndsr.ini` (see the client portion of "*Installing NDSR, Networked License*").

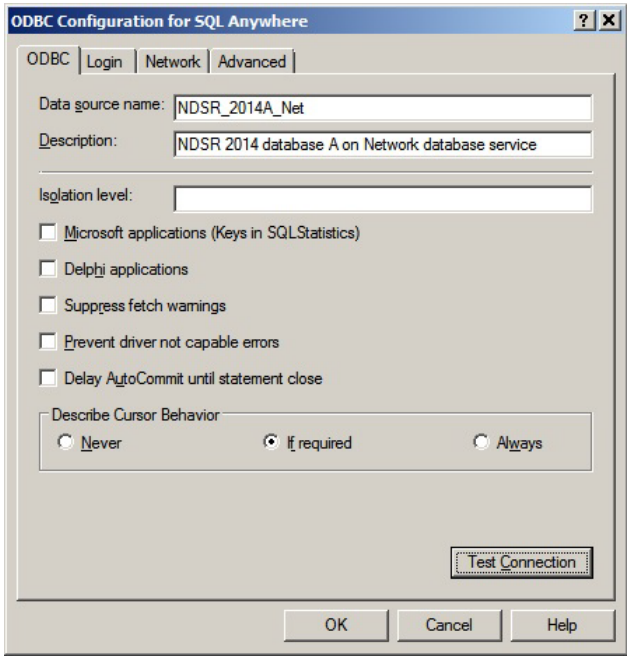
3. Complete the following steps to connect NDSR to the network database service.

4. Open the **Administrative Tools** window and select **Data Sources (ODBC)** from the list.

5. On the **ODBC Data Source Administrator** window, select the **System DSN** tab.

6. Either create a new DSN or find the existing DSN named **NDSR_2014** in the list, highlight it, and select the **CONFIGURE**> button.

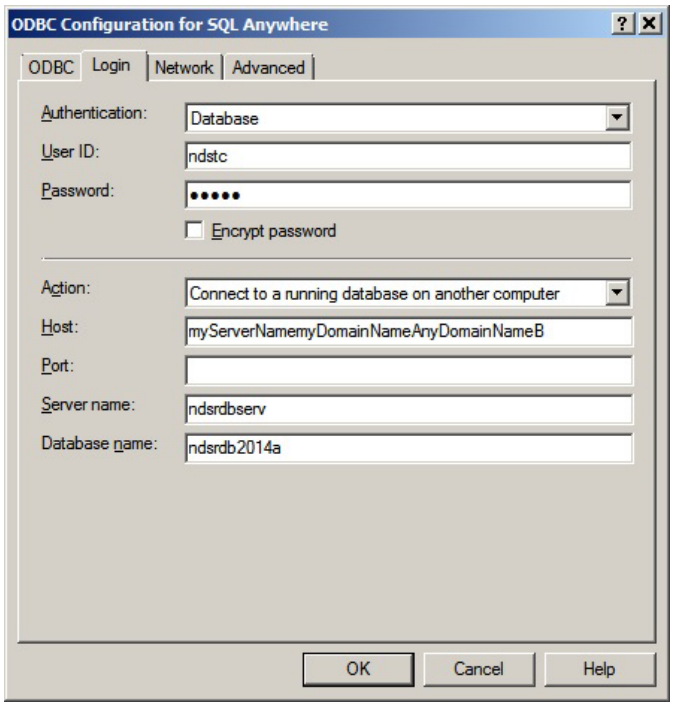
7. When the **ODBC Configuration for SQL Anywhere** window opens, verify or update the `Data source name:` and `Description:` fields.



8. Select the **Login** tab. On the `Action:` field select "`Connect to a running database on another computer`". Complete the `Server name:` and `Database name:` fields (to match the server name and database name you set in Part 2 for the network database service, e.g., ndsrdbserv and ndsrdb2014).

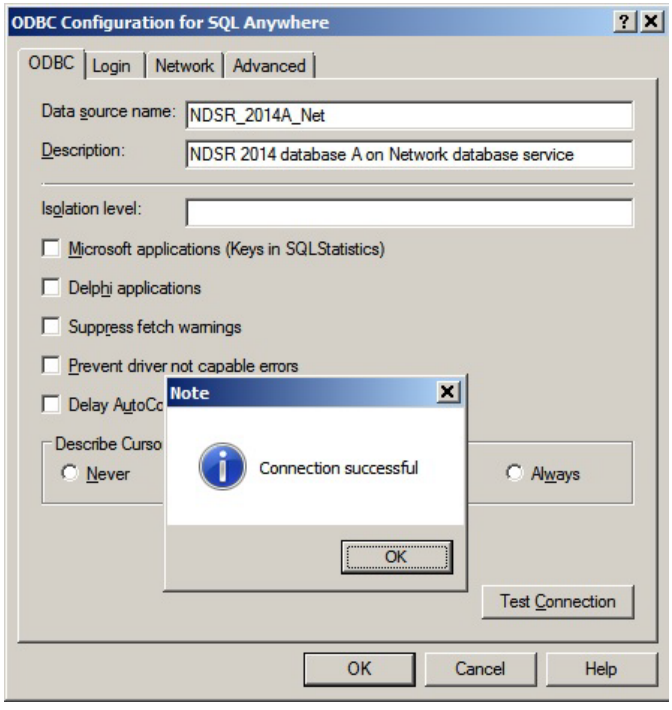
   In some cases, the client computer can't find the network database service (e.g., `ndsrdbserv`) unless the server computer is named in the `Host:` field. In some cases, an alternative to naming the `Host` machine here in the ODBC Configuration is to update the client machine's network connection (e.g., by specifying or correcting the primary and

secondary WINS servers) so that it can find the network database service by name (ndsrdbserv).



9. Select the **ODBC** tab and select the **TEST CONNECTION** button.

   Verify that the connection is successful.



   Select the **OK** button to finish.

Installing Additional Setups

An NDSR `Typical` or a `Client` installation provides one NDSR setup; that is, one instance of NDSR connected to one NDSR database. But sometimes that's not enough: additional setups may be desired to partition data, to register two different NDSR registration types (e.g., Research and Academic) on the same computer, or for other reasons.

The easiest way to install additional NDSR setups is to run an NDSR Custom installation (or a modification as described below) and add one or two setups (with local or network databases). An alternative method is summarized at the end of this section.

To add setups to a `Typical` installation, follow the instructions below that pertain to typical setups (ignoring those that pertain to other types of setups).

To add setups to a `Client` installation, first follow the instructions in "*Installing NDSR, Networked License and Database*" to add databases to the network database service. Then follow the instructions below that pertain to client setups (ignoring those that pertain to other types of setups).

1. Install and register NDSR (`Typical` or `Client`), and then modify that installation as follows.

2. Select **Start→Settings→Control Panel→ADD OR REMOVE PROGRAMS** (or **Programs→Uninstall a Program**).

3. In the list of installed programs, select `NDSR 2014`, and then select the **CHANGE/REMOVE** (or Change) button.

4. On the InstallShield **Welcome** window, select **MODIFY**, then select the **NEXT**> button.

5. On the **Select Features** window, expand the category `Additional Setups` and the subcategories A and B.

    a. To add <u>one</u> database, select <u>only one</u> option under **Additional Setup A**.
        - `Typical` installation: **LOCAL DATABASE**
        - `Client` installation: **NETWORK DATABASE**

    b. To add <u>two</u> databases, select <u>only one</u> option under **Additional Setup A** and <u>only one</u> option under **Additional Setup B** (local or network database as above).

NOTE: Do not deselect any of the currently-selected options or you will uninstall them.

    Select the **NEXT**> button.

6. On the **Maintenance Complete** window, select **FINISH** to complete the modified installation.

7. For a `Client` installation, create ODBC DSNs for NDSR_2014_A and/or NDSR_2014_B as described in "*Installing NDSR, Networked License and Database Part 3: NDSR Client Installations*" beginning on page 2.26.

   For a `Typical` installation, examine the ODBC DSNs NDSR_2014_A and/or NDSR_2014_B that were created above by the NDSR modified installation.

   For any installation, if the license path of the initial NDSR configuration file has been customized, then customize the license path in the same way for each additional setup.

8. To run an NDSR additional setup, select either **Start→Programs→NDSR 2014 A→NDSR** OR **Start→Programs→NDSR 2014 B→NDSR**.

   If more customization or automation is desired, an unlimited number of NDSR setups can be created manually (without running the NDSR installation). For each setup, create an ODBC DSN and an NDSR user folder that contains only an NDSR configuration file (ndsr.ini), an empty set of subfolders (additional files, backup, export, output, and reports), and a shortcut that tells the NDSR application to use this NDSR configuration file (`ndsr.ini`). Customize this NDSR configuration file for this DSN and these NDSR user folders (or, if desired, shared network folders).

   Enter the path of the NDSR configuration file at the end of the shortcut target so that it looks like the following (all on one line, quoting only the path of the executable):
   "`C:\Program Files\NCC\NDSR 2014\ndsr.exe`"
   `C:\ProgramData\NCC\NDSR 2014\ndsr.ini`

Reference Information

- For information about errors in NDSR, refer to "*Appendix 19, Troubleshooting*".